

MATERIAL SAFETY DATA SHEET (MSDS)

#182 (1)

MANUFACTURER/DISTRIBUTOR NAME: H & S MANUFACTURING, INC.
ADDRESS: 727 EAST BROADWAY
WILLISTON, ND 58801
EMERGENCY TELEPHONE NUMBER: CONTACT YOUR LOCAL POISON INFORMATION CENTER
PHONE (24 hr) TECHNICAL (800) 827-3091
EFFECTIVE DATE: 5/1/96

PRODUCT NAME: SPRINGTIME™ CLEAN-UP ABSORBENT POWDER

	<u>INGREDIENTS</u>	<u>HMIS:</u> Health 0/0
DIATOMACEOUS EARTH		Fire 0/0
CAS REG. NO.: NOT EST.	<u>PERCENTAGE:</u> 15-35%	Reactivity 0/0
TLV: 10mg/M3		Special 0/0

PHYSICAL DATA

BOILING POINT: N/A SPECIFIC GRAVITY: N/A VAPOR PRESSURE: N/A
PERCENT VOLATILE BY VOLUME: 0 VAPOR DENSITY: N/A
EVAPORATION RATE: N/A
SOLUBILITY IN WATER: NEGLIGIBLE
APPEARANCE AND ODOR: GRANULAR WHITE SOLID WITH FRAGRANT ODOR

FIRE AND EXPLOSIVE DATA

FLASH POINT: NONE FLAMMABLE LIMITS: N/A
LEL: N/A UEL: N/A
EXTINGUISHING MEDIA: WATER, CO2, FOAM, DRY CHEMICAL
SPECIAL FIRE FIGHTING PROCEDURES: AVOID STRONG OXIDIZING AGENTS
UNUSUAL FIRE AND EXPLOSION HAZARDS: PRODUCT BECOMES SLIPPERY WHEN WET DUE TO GEL FORMATION

REACTIVE HAZARDS

PRODUCT STABLE: YES
CONDITIONS TO AVOID: KEEP AWAY FROM HEAT AND OPEN FLAMES
INCOMPATIBILITY: HYDROFLUORIC ACID, STRONG OXIDIZING AGENTS
HAZARDOUS DECOMPOSITION PRODUCTS: NONE
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID: HIGH DUST CONCENTRATIONS

HEALTH HAZARDS

EFFECTS OF OVEREXPOSURE: MAY CAUSE TEMPORARY IRRITATION OR INFLAMMATION OF THE EYE, NOSE AND BRONCHI.

FIRST AID PROCEDURE

INHALATION: REMOVE PERSON TO FRESH AIR.
SKIN OR EYE CONTACT: FLUSH WITH RUNNING WATER FOR SEVERAL MINUTES.
INGESTION: DRINK LARGE QUANTITY OF WATER. DO NOT INDUCE VOMITING. SEE A PHYSICIAN.

HANDLING PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: VACUUM DRY SPILL. IF SPILL BECAME WET AND GELLED, SHOVEL UP OR HOSE IT DOWN WITH COPIOUS AMOUNTS OF WATER. SURFACE UPON WHICH MATERIAL HAS BEEN APPLIED WILL BECOME SLIPPERY WHEN WET.
WASTE DISPOSAL METHOD: COMPLY WITH LOCAL, STATE AND FEDERAL REGULATIONS. NO MAJOR PRECAUTIONS.
RCPA: NON-HAZARDOUS
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: STORE IN COOL, DRY PLACE TO PROTECT PRODUCT FROM MOISTURE. KEEP OUT OF REACH OF CHILDREN. OPERATORS APPLYING LARGE AMOUNTS OF PRODUCT SHOULD WEAR APPROVED DUST RESPIRATORS AND GOGGLES.

SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): FOR USE WITH LARGE AMOUNTS OF MATERIAL. WEAR NIOSH APPROVED RESPIRATOR AS REQUIRED.
VENTILATION: MECHANICAL EXHAUST IS ADEQUATE. PROTECTIVE GLOVES: NOT REQUIRED.
EYE PROTECTION: WHEN APPLYING LARGE AMOUNTS OF MATERIAL, USE APPROVED GLOVES.
OTHER PROTECTIVE EQUIPMENT: NOT REQUIRED.

PRODUCT INFORMATION**CHEMICAL NAME:** Calcium hypochlorite.**SYNONYMS:**

Calcium oxychloride, bleaching powder, chlorinated lime, granulated chlorinem, and Chloryte 65%.

CHEMICAL FAMILY: Salt of hypochlorous acid.**MOLECULAR FORMULA:** Ca(OCl)₂**SHIPPING NAME:** Calcium hypochlorite.**PIN - (UN/NA):** UN1748 Cl5.1(9.2) P.G.II**WHMIS:** Exempt (P.C.P. regulated).**PRODUCT USE:**

Disinfection in swimming pools and drinking water supplies; treatment of industrial cooling water; slime control; odour control; sewage and waste water treatment.

MANUFACTURER: Saskatoon Chemicals Ltd.

Box 1586

Saskatoon, SK S7K 3R3

EMERGENCY TELEPHONE NUMBER: (306) 931-7767**SUPPLIER:** PrairieChem Inc.

231 Robin Crescent

Saskatoon, SK S7L 6M8

EMERGENCY TELEPHONE NUMBER: (306) 664-2522**HAZARDOUS INGREDIENTS**

INGREDIENTS:	WEIGHT %	C.A.S. REGISTRY NUMBER:
Calcium hypochlorite	65	7778-54-3
Calcium hydroxide	4	1305-62-0
Inerts	35	

PHYSICAL DATA**PHYSICAL STATE:** Solid**ODOUR AND APPEARANCE:**

White, granular solid, with a strong chlorine odour.

ODOUR THRESHOLD: Not available.**VAPOUR PRESSURE:** Not applicable. **VAPOUR DENSITY:** Not applicable.**EVAPORATION RATE:** Not applicable. **pH:** 11.5 (5% solution)**BOILING POINT:** Not applicable. **SPECIFIC GRAVITY:** 2.00-2.20 @ 20 °C.**MELTING POINT:** Decomposes at temperatures above 100°C.**SOLUBILITY IN WATER:** 21% @ 20 °C. **MOLECULAR WEIGHT:** 142.98**% VOLATILE BY VOLUME:** Not available.**COEFFICIENT OF WATER/OIL DISTRIBUTION:** Not applicable.**FIRE AND EXPLOSION DATA****CONDITIONS OF FLAMMABILITY:** Not available.**MEANS OF EXTINGUISHING:**

Drench with water, and cool surrounding products and area with water. Water in contact with hot Hypochlorites can release hydrochloric acid or chlorine gas. Use appropriate self-contained breathing apparatus when any material is involved in a fire.

FLASH POINT:

Not combustible (does not burn). Be aware that calcium hypochlorite can decompose violently at temperatures above 100°C, releasing heat and oxygen gas.

UPPER FLAMMABLE LIMIT: Not applicable.**LOWER FLAMMABLE LIMIT:** Not applicable.

FIRE AND EXPLOSION DATA

AUTO IGNITION TEMPERATURE: Not applicable.

HAZARDOUS COMBUSTION PRODUCTS: Oxygen, chlorine, and chlorine monoxide.

SPECIAL FIRE FIGHTING PROCEDURES:

Use water only. Drench with water and cool surrounding products and area with water. Water in contact with hot hypochlorites can release Hydrochloric acid or chlorine gas. Use appropriate self-contained breathing apparatus when any material is involved in a fire.

EXPLOSION HAZARDS:

Powerful oxidizing material. With acids, evolves chlorine at ambient temperatures. On combustion, and with subsequent decomposition, evolves oxygen at higher temperatures. Readily ignites combustible materials and strong reducing agents when in contact. May undergo accelerated decomposition with evolution of heat. Contamination or mixing with any foreign material may result in a fire of great intensity.

REACTIVITY DATA

STABILITY: Stable (up to 180 °C).

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITY:

AMMONIA, UREA AND AMINES - form reactive, toxic chloramines.

ACIDS - release chlorine gas.

METAL OXIDES - can react violently.

HAZARDOUS REACTIONS/DECOMPOSITIONS:

Calcium hypochlorite is a strong oxidizing agent. Mix only into water. Contamination may start a chemical reaction with generation of heat, liberation of hazardous gases, and possible fire and explosion.

CONDITIONS TO AVOID:

Calcium hypochlorite should be kept away from household soap, suntan lotions, paint products, solvents, acids, beverages, lighted cigarettes, combustible materials, garbage, dirt, dirty rags, organic materials, and other pool chemicals. Mixing with any of the above materials can initiate a hazardous decomposition of calcium hypochlorite. Calcium hypochlorite should not be mixed with anything but water.

HEALTH HAZARD DATA

INHALATION:

Dust and mist irritate the nose and throat. When mixed with acids, chlorine gas is released. This gas causes irritation of the respiratory tract. Prolonged exposure to high concentrations of chlorine gas may result in severe lung damage.

SKIN CONTACT:

Calcium hypochlorite dust and solutions can cause irritation, and in severe cases, chemical burns.

EYE CONTACT:

Exposure to calcium hypochlorite can cause eye irritation. Concentrated solutions cause burns which may result in permanent eye damage if not promptly treated.

INGESTION:

When ingested, there will be burning in the mouth and throat. Calcium Hypochlorite can cause abdominal cramps and nausea which may lead to convulsions, coma, and death.

CHRONIC EXPOSURE EFFECTS:

Skin irritation may occur from repeated or prolonged skin contact.

EXPOSURE LIMITS: (TLV-TWA) Not available.

IRRITANCY: Not available.

MUTAGENICITY: Not available.

CARCINOGENICITY: Not carcinogenic (IARC and ACGIH).

HEALTH HAZARD DATA

SENSITIZATION TO PRODUCT: Not available.

REPRODUCTIVE TOXICITY: Not available.

TOXICOLOGICALLY SYNERGISTIC MATERIALS: Not available.

TERATOGENICITY DATA: Not available.

ANIMAL TOXICITY DATA:

LC₅₀: (Inhalation, rats) - 148 mg/l (65% Calcium Hypochlorite)

LD₅₀: (Oral, rats) - 1300 mg/kg (65% Calcium Hypochlorite)

OTHER HEALTH EFFECTS: None known.

FIRST AID MEASURES**INHALATION:**

Remove source of contamination or move victim to fresh air. If breathing has stopped, trained personnel should begin artificial respiration or, if the heart has stopped, cardiopulmonary resuscitation (CPR) immediately. Obtain medical attention immediately.

SKIN CONTACT:

As quickly as possible, flush contaminated area with lukewarm, gently running water for at least 15 minutes. Under running water, remove contaminated clothing, shoes, and leather goods. Obtain medical attention immediately.

EYE CONTACT:

Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes, holding the eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. Obtain medical attention immediately.

INGESTION:

Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. Do not induce vomiting. Have victim drink one cup (240-300 ml, 8-10 oz.) of water to dilute material in stomach. If vomiting occurs naturally, rinse mouth and repeat administration of water. If breathing has stopped, trained personnel should begin artificial respiration or, if the heart has stopped, cardiopulmonary resuscitation (CPR) immediately. Obtain medical attention

PREVENTATIVE MEASURES**RESPIRATORY PROTECTION:**

Dust mask or NIOSH approved canister type respirators suitable for chlorine.

SKIN PROTECTION:

Impervious gloves, body suits, boots, and/or other resistant protective clothing. Have a safety shower/eye wash fountain readily available in the immediate work area.

EYE/FACE PROTECTION:

Chemical safety goggles. A face shield may be necessary.

SPECIAL HANDLING PROCEDURES:

Avoid generating dust. Avoid mixing pure material with contaminated material. Use smallest possible amounts in designated areas with adequate ventilation.

STORAGE REQUIREMENTS:

Store in original container. Store tightly closed containers in a clean, cool, open or well ventilated area. Keep out of sun.

ENGINEERING CONTROLS:

Local exhaust ventilation required where exposure to dust might occur.

SPECIAL SHIPPING REQUIREMENTS:

Transportation in Canada is governed by Transport Canada. Refer to the Transportation of Dangerous Goods (TDG) Regulations for special shipping requirements for calcium hypochlorite. Transport in the U.S. is governed by the Department of Transport (DOT). Refer to DOT regulations (CFR 49) for special shipping requirements for calcium hypochlorite (UN1748).

ENVIRONMENTAL PROTECTION DATA**STEPS IN THE EVENT OF A LEAK OR SPILL:**

Restrict access to area until completion of cleanup. Wear adequate personal protective equipment. Extinguish or remove all ignition sources. Ventilate area. Do not touch spilled material. Prevent material from entering sewers or confined spaces. Shovel into clean, dry, labelled containers. Flush area with water. Contaminated materials may be dissolved in water then treated with a reducing agent such as sodium sulphite. Care should be taken handling contaminated materials due to fire risk.

ENVIRONMENTAL EFFECTS:

Harmful to aquatic life in low concentrations.

DEACTIVATING CHEMICALS:

Sodium sulphite, Sodium bisulphite, or hydrogen peroxide can be used. Do not use acids, since chlorine gas will be liberated.

WASTE DISPOSAL METHODS:

Consult appropriate Federal, State/Provincial, and local regulatory authorities to ascertain proper disposal procedures. Care should be taken not to mix waste calcium hypochlorite with incompatible material. Calcium hypochlorite should be dissolved in water, and the available chlorine treated using a reducing agent such as sodium sulphite.

PREPARATION INFORMATION

MSDS PREPARED BY: Technical Department
PrairieChem Inc.

TELEPHONE NUMBER: (306) 664-2522

DATE PREPARED/REVISED: December 13, 1991

DATE PRINTED: November 7, 1991

REFERENCES:

1. Manufacturer's MSDS and publications of the Chlorine Institute Inc.
2. Hawley, Gessner G. "The Condensed Chemical Dictionary, Tenth Edition" (Van Nostrand Reinhold Co.) 1981.

MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 1, Flammability = 2, Reactivity = 0

HMIS RATING: Health = 1, Flammability = 2, Reactivity = 0

SECTION I – IDENTITY AND MANUFACTURER'S INFORMATION**Distributor:** HILLYARD INDUSTRIES**Product Name:** QT-TB**Address:** 302 North Fourth Street
St. Joseph, MO 64501**Date Prepared:** December 31, 1998**Prepared by:** Regulatory Affairs Department**Emergency Telephone No.:** (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)**Other information calls:** (816) 233-1321 (Ext. 8285)<http://www.hillyard.com>**SECTION II – INGREDIENTS/IDENTITY INFORMATION**

Components (Specific Chemical Identity: CAS#	OSHA	ACGIH	OTHER LIMITS	%
Common Name(s):	PEL	TLV	RECOMMENDED	
Diethylene Glycol Monobutyl Ether*(1) 112-34-5	not est.	not est.	N.A.	5-10
EDTA Tetrasodium Salt 64-02-8	not est.	not est.	N.A.	----
Water 7732-18-5	none	none	N.A.	----

(1) Regulated by the following states: OH and PA.

* This product contains the following chemical subject to reporting requirements of SARA Title III, Section 313 and 40 CFR Part 372: Diethylene Glycol Monobutyl Ether.

SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS**Boiling Point:** Approximately 212°F**Specific Gravity (H₂O = 1):** 1.01 ± 0.01**Vapor Pressure (mm Hg.):** Not est.**Percent Volatile by Volume (%):** greater than 95%**Vapor Density (AIR = 1):** less than 1**Evaporation Rate (ethyl ether = 1):** slower than 1**Solubility in Water:** Complete**Appearance and Odor:** Clear liquid, lemon fragrance**pH =** 11.7**SECTION IV – FIRE AND EXPLOSION HAZARD DATA****Flash point:** greater than 180°F (T.C.C.) **Flammable Limits:** LEL = N.E. UEL = N.E.**Extinguishing Media:** Water, CO₂, foam or media suitable for surrounding fire.**Special Fire Fighting Procedures:** Standard fire fighting procedures may be followed, including full protective gear, NIOSH approved self-contained breathing apparatus.**Unusual Fire and Explosion Hazards:** None known to manufacturer.**SECTION V – PHYSICAL HAZARDS****Stability:** Stable **Conditions to Avoid:** None known to manufacturer.**Incompatibility (Materials to Avoid):** Do not mix with other chemicals.**Hazardous Decomposition Products or Byproducts:** Thermal decomposition or burning may produce toxic vapors or gases.**Hazardous Polymerization:** Will not occur **Conditions to Avoid:** None known to manufacturer.**SECTION VI – HEALTH HAZARD DATA****Routes of entry:** Inhalation? no Skin? yes Ingestion? yes**HEALTH HAZARDS (1. Acute and 2. Chronic)**1. **Acute:** Harmful if swallowed. Eye and skin irritant. 2. **Chronic:** None known to manufacturer.**Chemical listed as Carcinogen or Potential Carcinogen:**

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

Signs and Symptoms of Exposure: Irritation or burning sensation.**Medical Conditions Generally Aggravated by Exposure:** May aggravate skin disorders or respiratory ailments.

HEALTH HAZARD DATA (CONTINUED)

Emergency and First Aid Procedures: **Eye Contact:** Flush immediately with water for 15 minutes. Get medical attention. **Skin Contact:** Flush with water for 15 minutes. Remove and wash contaminated clothing. **Ingestion:** Rinse mouth with water. Then drink 1-2 glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Wear appropriate protective equipment. If possible, contain spill and collect in an approved container. Rinse affected area thoroughly with water. Keep product out of sewers or waterways. Hold for disposal.

Waste Disposal Method: Dispose of in accordance with applicable local, state, and federal regulations. If possible, triple rinse container and recycle.

Precautions To Be Taken In Handling And Storing: Avoid contact with skin or eyes. Avoid breathing vapor, spray or mist. Store in original container, in cool dry place with adequate ventilation. Keep out of reach of children. Keep container tightly closed when not in use.

Other Precautions: Use only according to label directions. If unsure about safe use, contact your supervisor immediately.

SECTION VIII – CONTROL MEASURES

Respiratory Protection (Specify Type): Not expected to be necessary under normal conditions of use. Where exposure cannot be adequately controlled by general or local ventilation, use appropriate respiratory protection to prevent over exposure. An approved dust/mist respirator would be recommended.

Ventilation: Local Exhaust = As necessary Mechanical (General) = Adequate Special = N.A. Other = N.A.

Protective Gloves: Water impervious (Latex, Neoprene)

Eye Protection: Chemical Resistant Goggles or Face Shield.

Other Protective Clothing or Equipment: Not Required.

Work / Hygienic Practices: Follow OSHA mandated procedures. Never eat or smoke while working with chemicals. Good housekeeping practices apply. Wash thoroughly after handling.

SECTION IX – TRANSPORTATION INFORMATION

Applicable regulations: 49 CFR = no; IMCO = no; IATA = no

Proper shipping name: Cleaning compound

UN No.: not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable

Labels required: not required **DOT Exception:** not applicable

EPA Hazardous waste number / code: not listed

Hazardous waste characteristics:

Ignitability = not applicable; Corrosivity = not applicable; Reactivity = not applicable

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein